

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Original) A method of measuring renal function in a living subject using computed tomography comprising the steps of:
  - a) obtaining a CT number ( $CT_{PRE}$ ) of arterial blood prior to addition of a radiographic contrast agent to the blood,
  - b) providing a radiographic contrast agent to the blood,
  - c) obtaining a CT number ( $CT_A$ ) of arterial blood after addition of the radiographic contrast agent to the blood,
  - d) obtaining a CT number ( $CT_V$ ) of blood in a renal vein after addition of the agent to the blood, and
  - e) determining renal function from the obtained CT numbers.
2. (Original) The method as defined by claim 1 wherein the renal function is renal extraction fraction.
3. (Original) The method as defined by claim 2 wherein renal extraction fraction (EF) is given by:
$$EF = \frac{CT_A - CT_V}{CT_A - CT_{PRE}}$$
4. (Original) The method as defined by claim 3 wherein step b) includes providing iohexol.
5. (Original) The method as defined by claim 3 wherein step b) includes providing iothalamate.
6. (Original) The method as defined by claim 3 wherein step b) includes providing gadolinium-DTPA.
7. (Original) The method as defined by claim 1 wherein step b) includes providing iohexol.

8. (Original) The method as defined by claim 1 wherein step b) includes providing iothalamate.
9. (Original) The method as defined by claim 1 wherein step b) includes providing gadolinium-DTPA.
10. (Currently Amended) A method of determining renal extraction fraction (EF) for a kidney in a living subject, using a computed tomography (CT) apparatus comprising the steps of:
- a) obtaining a measure of x-ray transmission through arterial blood prior to addition of a radiographic contrast agent to the blood, using the CT apparatus,
  - b) providing a radiographic contrast agent to the blood,
  - c) obtaining a measure of x-ray transmission through arterial blood after addition of the radiographic contrast agent to the blood, using the CT apparatus,
  - e) d) obtaining a measure of x-ray transmission through renal vein blood after addition of the radiographic contrast agent to the blood, and
  - ~~e)~~ e) determining renal extraction fraction from the measures of x-ray transmission in steps a), and ~~b), and c), and d).~~
11. (Original) The method as defined by claim 10 wherein the measures of x-ray transmission are obtained using computed tomography (CT).
12. (Original) The method as defined by claim 11 wherein the measures of x-ray transmission are CT numbers.
13. (Original) The method as defined by claim 11 wherein the radiographic contrast agent is selected from the group consisting of iohexol, iothalamate, and gadolinium-DTPA.
14. (Original) The method as defined by claim 10 wherein the radiographic contrast agent is selected from the group consisting of iohexol and iothalamate.